EXHIBIT 13

Agen	nts Classified by the IARC Monographs , Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
	· · · · · · · · · · · · · · · · · · ·	•	Sup 7, 62, 88,		Additional information
	Formaldehyde	1	100F	2012	
	Phenobarbital	2B	Sup 7, 79	2001	
	Mitomycin C	2B	10, Sup 7 26, Sup 7,	1987	
50-18-0 6055-19-2	Cyclophosphamide	1	26, Sup 7, 100A	2012	
50-29-3	DDT (4,4'-dichlorodiphenyltrichloroethane)	2A	Sup 7, 53, 113	2018	
	Benzo[<i>a</i>)]pyrene	1	Sup 7, 92, 100F	2012	NB: Overall evaluation upgraded to Group 1 based on mechanistic and oth
50.22.0	Di li	2	13, Sup 7	1007	relevant data
	Phenylbutazone Clomiphene citrate	3	13, Sup / 21, Sup 7	1987 1987	
	6-Mercaptopurine	3	26, Sup 7	1987	
	Reserpine	3	24, Sup 7	1987	
	Actinomycin D	3	10, Sup 7	1987	
51-02-5	Pronetalol hydrochloride	3	13, Sup 7	1987	
	Piperonyl butoxide	3	30, Sup 7	1987	
51-18-3	2,4,6-Tris(1-aziridinyl)- <i>s</i> -triazine	3	9, Sup 7	1987	
51-21-8	5-Fluorouracil	3	26, Sup 7	1987	
51-52-5	Propylthiouracil	2B	Sup 7, 79	2001	
	Nitrogen mustard	2A	9, Sup 7	1987	
	Ethyl carbamate (Urethane)	2A	7, Sup 7, 96	2010	
52-01-7	Spironolactone	3	Sup 7, 79	2001	
52-24-4	Thiotepa	1	Sup 7, 50,	2012	
			100A		1
	Apholate Thick looks	3	9, Sup 7	1987	
	Trichlorfon Prednisone	3	30, Sup 7 26, Sup 7	1987 1987	
	Dibenz[<i>a</i> , <i>h</i>] anthracene	2A	Sup 7, 92	2010	NB: Overall evaluation upgraded to Group 2A with supporting evidence
					from other relevant data
	Chloroquine	3	13, Sup 7	1987	
	Furosemide (Frusemide)	3	50	1990	
54-85-3	Isonicotinic acid hydrazide (Isoniazid)	3	4, Sup 7	1987	ND. OIIItiI-I-I
55-18-5	<i>N</i> -Nitrosodiethylamine	2A	17, Sup 7	1987	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
55-98-1	1,4-Butanediol dimethanesulfonate (see Busulfan)				
	Busulfan	1	4, Sup 7, 100A	2012	
	Myleran (see Busulfan) Methylthiouracil	2B	C 7 70	2001	
	Carbon tetrachloride	2B	Sup 7, 79 20, Sup 7, 71	1999	
	Cantharidin	3	10, Sup 7	1987	
56-38-2	Parathion	2B	30, Sup 7, 112	2017	
56-53-1	Diethylstilbestrol	1	21, Sup 7, 100A	2012	
56-55-3	Benz[<i>a</i>]anthracene	2B	92, Sup 7	2010	
56-75-7	Chloramphenicol	2A	Sup 7, 50	1990	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
57-06-7	Allyl isothiocyanate	3	73, Sup 7	1999	
	1,1-Dimethylhydrazine	2B	4, Sup 7, 71	1999	
57-39-6	Tris(2-methyl-1-aziridinyl)phosphine oxide	3	9, Sup 7	1987	
	Phenytoin	2B	Sup 7, 66	1996	
57-57-8	beta-Propiolactone	2B	4, Sup 7, 71	1999	
57-68-1	Sulfamethazine	3	79	2001	NB: Overall evaluation downgraded Group 3 with supporting evidence fr other relevant data
57-74-9	Chlordane	2B	Sup 7, 53, 79	2001	
	Cholesterol	3	31, Sup 7	1987	
	Caffeine	3	51	1991	
	Pyrimethamine	3	13, Sup 7	1987	
	Theophylline	3	51	1991	
	Lindane (see also Hexachlorocyclohexanes) Hydrochlorothiazide	1 2B	113 50, 108	2018	+
	Methotrexate Methotrexate	2B 3	26, Sup 7	1987	
	Nitrofural (Nitrofurazone)	3	50	1990	
	<i>N</i> -Nitrosomorpholine	2B	17, Sup 7	1987	
	<i>para</i> -Aminoazobenzene	2B	8, Sup 7	1987	
	<i>para</i> -Dimethylaminoazobenzene	2B	8, Sup 7	1987	
60.25.5	Acetamide	2B	7, Sup 7, 71	1999	
	Methimazole Dieldrin (see Dieldrin, and aldrin metabolized to dieldrin)	3	79	2001	+
60-56-0	Dictorn (See Dictorni, and addrift metabolized to dictorn)	2A	5, Sup 7, 117	2019	+
60-56-0 60-57-1			J, 5up /, 11/		
60-56-0 60-57-1 77-1, 309-00-2	Dieldrin, and aldrin metabolized to dieldrin		13 Sun 7	1927	
60-56-0 60-57-1 7-1, 309-00-2 61-57-4		2B 3	13, Sup 7 79, Sup 7	1987 2001	Group 3 with supporting evidence fr
60-56-0 60-57-1 7-1, 309-00-2 61-57-4 61-82-5	Dieldrin, and aldrin metabolized to dieldrin Niridazole	2B	79, Sup 7 24, Sup 7,		Group 3 with supporting evidence fr other relevant data NB: Overall evaluation upgraded to
60-56-0 60-57-1 77-1, 309-00-2 61-57-4 61-82-5	Dieldrin, and aldrin metabolized to dieldrin Niridazole Amitrole	2B 3	79, Sup 7	2001	

0.31	ts Classified by the IARC Monographs, Volumes 1–123				
S No.	Agent	Group	Volume	Year	Additional information
	Thioacetamide	2B	7, Sup 7	1987	
	Thiourea	3	Sup 7, 79	2001	
62-73-7	Dichlorvos	2B	Sup 7, 53	1991	VID O II I I I
(2.75.0		2.	15 6 5	1005	NB: Overall evaluation upgraded to
62-75-9	<i>N</i> -Nitrosodimethylamine	2A	17, Sup 7	1987	Group 2A with supporting evidence
(2.25.2	0.1.1	2	12 6 7	1007	from other relevant data
	Carbaryl	3	12, Sup 7	1987	
	Phenoxybenzamine hydrochloride	2B	24, Sup 7	1987	
64-17-5	Ethanol in alcoholic beverages	1	96, 100E	2012	VD 0 11 1 1 1 1 1 1 1
64-67-5	Diethyl sulfate	2A	54, 71	1999	NB: Overall evaluation upgraded t Group 2A with supporting evidence
66-27-3	Methyl methanesulfonate	2A	7, Sup 7, 71	1999	from other relevant data NB: Overall evaluation upgraded t Group 2A with supporting evidence
					from other relevant data
	Uracil mustard	2B	9, Sup 7	1987	
	Nitrofurantoin	3	50	1990	
	Furazolidone	3	31, Sup 7	1987	
	Isopropyl alcohol	3	15, Sup 7, 71	1999	
	Chloroform	2B	Sup 7, 73	1999	
	Hexachloroethane	2B	73	1999	
	<i>N</i> , <i>N</i> -Dimethylformamide	2A	47, 71, 115	2018	
	Tris(aziridinyl)- <i>para</i> -benzoquinone (Triaziquone)	3	9, Sup 7	1987	
69-53-4	Ampicillin	3	50	1990	
70-25-7	<i>N</i> -Methyl- <i>N</i> -nitro- <i>N</i> -nitrosoguanidine (MNNG)	2A	4, Sup 7	1987	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
70-30-4	Hexachlorophene	3	20, Sup 7	1987	
	•	1	29, Sup 7		
/1-43-2	Benzene	1	100F, 120	2018	
71-55-6	1,1,1-Trichloroethane	3	20, Sup 7, 71	1999	
71-58-9	Medroxyprogesterone acetate	2B	21, Sup 7	1987	
72-20-8		3	5, Sup 7	1987	
72-43-5	Methoxychlor	3	20, Sup 7	1987	
	Trypan blue	2B	8, Sup 7	1987	
	Methyl bromide	3	41, Sup 7, 71	1999	
	Ethylene	3	Sup 7, 60	1994	
	Methyl chloride	3	41, Sup 7, 71	1999	
	Methyl iodide	3	41, Sup 7, 71	1999	
	Bromoethane	3	52, 71	1999	
	Chloroethane	3	52, 71	1999	
			Sup 7, 97,		
75-01-4	Vinyl chloride	1	100F	2012	
	Vinyl fluoride	2A	Sup 7, 63, 97	2008	NB: (1) Overall evaluation upgrad Group 2A based on mechanistic ar other relevant data; (2) For practical purposes, vinyl fli should be considered to act similar the human carcinogen vinyl chloric
	Acetaldehyde	2B	36, Sup 7, 71	1999	
	Acetaldehyde associated with consumption of alcoholic beverages	1	100E	2012	
75-09-2	Dichloromethane (Methylene chloride)	2A	Sup 7, 71, 110 Sup 7, 60, 97,	2017	NB: Overall evaluation upgraded t
75-21-8	Ethylene oxide	1	100F	2012	Group 1 based on mechanistic and relevant data
75-25-2	Bromoform	3	52, 71	1999	
75-27-4	Bromodichloromethane	2B	52, 71	1999	
75 25 4	Vinylidene chloride	2B	39, Sup 7, 71,	2019	
		2B	119		<u> </u>
	Vinylidene fluoride	3	39, Sup 7, 71	1999	
	Chlorodifluoromethane	3	41, Sup 7, 71	1999	
75-52-5	Nitromethane	2B	77	2000	
75-55-8	2-Methylaziridine (Propyleneimine)	2B	9, Sup 7, 71	1999	
	Propylene oxide	2B	Sup 7, 60	1994	
75-60-5	Dimethylarsinic acid	2B	100C	2012	
75-87-6		2A	63, 84, 106	2014	
	2-Chloro-1,1,1-trifluoroethane	3	41, Sup 7, 71	1999	
	Pentachloroethane	3	41, Sup 7, 71	1999	
76-03-9	Trichloroacetic acid	2B	63, 84, 106	2014	
	Heptachlor	2B	Sup 7, 53, 79	2001	
77-09-8	Phenolphthalein	2B	76	2000	
77-78-1	Dimethyl sulfate	2A	4, Sup 7, 71	1999	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
79 70 5	Isonrene	2B	60, 71	1999	nom omer reievant data
	Isoprene 1,2-Dichloropropane	2B	41, Sup 7, 71,	2017	
			110		+
	Methylglyoxal	3	51	1991	
78-98-8		-			1
78-98-8 79-00-5	1,1,2-Trichloroethane	3	52, 71	1999	
78-98-8 79-00-5	1,1,2-Trichloroethane Trichloroethylene	3	52, 71 Sup 7, 63, 106	2014	NB: Overall evaluation upgraded t

Agen	ts Classified by the IARC Monographs, Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
79-34-5	1,1,2,2-Tetrachloroethane	2B	20, Sup 7, 71,	2014	
79-43-6	Dichloroacetic acid	2B	106 63, 84, 106	2014	
7,7 1,5 0	District with	25	03, 01, 100	2011	NB: Overall evaluation upgraded to
79-44-7	Dimethylcarbamoyl chloride	2A	12, Sup 7, 71	1999	Group 2A with supporting evidence
79-46-9	2-Nitropropane	2B	29, Sup 7, 71	1999	from other relevant data
	* *				
79-94-7	Tetrabromobisphenol A	2A	115	2018	
80.08.0	Dapsone	3	24, Sup 7	1987	
80-62-6	Methyl methacrylate	3	Sup 7, 60	1994	ND: 0111ti 11
81-07-2	Saccharin and its salts	3	Sup 7, 73	1999	NB: Overall evaluation downgraded Group 3 with supporting evidence f
					other relevant data
	Musk xylene	3	65	1996	
	1-Amino-2,4-dibromoanthraquinone Rhodamine B	2B 3	101 16, Sup 7	2013 1987	
	1-Amino-2-methylanthraquinone	3	27, Sup 7	1987	
	Quintozene (Pentachloronitrobenzene)	3	5, Sup 7	1987	
	Acenaphthene	3	92	2010	
83-63-6	Diacetylaminoazotoluene	3	8, Sup 7	1987	
83-66-9	Musk ambrette	3	65	1996	
	Theobromine	3	51	1991	
	Anthraquinone	2B	101	2013	
	Phenanthrene Butyl benzyl phthalate	3	Sup 7, 92 Sup 7, 73	2010 1999	
	Scarlet Red	3	8, Sup 7	1987	
	Yellow AB	3	8, Sup 7	1987	
	Sudan III <i>N</i> -Nitrosodiphenylamine	3	8, Sup 7 27, Sup 7	1987 1987	
	<tb>NV</tb> IntrosodipnenylamineHydralazine	3	24, Sup 7	1987	
	1-Nitronaphthalene	3	46	1989	
86-73-7	Fluorene	3	Sup 7, 92	2010	
86-74-8	Carbazole	2B	32, Sup 7, 71, 103	2013	
86-88-4	1-Naphthylthiourea (ANTU)	3	30, Sup 7	1987	
87-29-6	Cinnamyl anthranilate	3	Sup 7, 77	2000	
	2,6-Dimethylaniline (2,6-Xylidine)	2B	57	1993	
	Hexachlorobutadiene Pentachlorophenol (see also Polychlorophenols)	3	73 53, 71, 117	1999 2019	
	2,4,6-Trimethylaniline	3	27, Sup 7	1987	
	2,4,6-Trichlorophenol (see also Polychlorophenols)	2B	117	2019	
88-12-0	<i>N</i> -Vinyl-2-pyrrolidone	3	19, Sup 7, 71	1999	NB: Overall evaluation upgraded to
88-72-2	2-Nitrotoluene	2A	101	2013	Group 2A with supporting evidence from other relevant data
88-73-3 					
	Chloronitrobenzene)				
	2-Chloronitrobenzene	2B	65, 123	In prep	
	1,4-Dichloro-2-nitrobenzene	2B	65, 123	In prep	
	Pulegone	2B	108	2016	
	<i>>ortho</i> -Anisidine <i>ortho</i> -Phenylphenol	2B 3	Sup 7, 73	1999 1999	
	Penicillic acid	3	10, Sup 7	1987	
90-94-8	Michler's ketone [4,4 -Bis(dimethylamino)-benzophenone]	2B	99	2010	
	Naphthalene	2B	82	2002	
	Quinoline 2-Nitroanisole	2B 2B	121 65	In prep 1996	
			4, Sup 7, 99,		
	2-Naphthylamine	1	100F	2012	
	Coumarin 3,3'-Dimethoxybenzidine-4,4'-diisocyanate	3	Sup 7, 77 39, Sup 7	2000 1987	
	3,3'-Dichlorobenzidine	2B	29, Sup 7	1987	
92-67-1	4-Aminobiphenyl	1	1, Sup 7, 99, 100F	2012	
92-87-5	Benzidine	1	29, Sup 7, 99, 100F	2012	
	4-Nitrobiphenyl	3	4, Sup 7	1987	
	Methyleugenol Benzoyl peroxide	2B 3	101 36, Sup 7, 71	2013 1999	
	Dihydrosafrole	2B	10, Sup 7, 71	1999	
94-59-7	Safrole	2B	10, Sup 7	1987	
	2,4-D (2,4-dichlorophenoxyacetic acid) (See also Chlorophenoxy herbicides)	2B	113	2018	
	Sulfallate <i>>ortho</i> >-Dichlorobenzene	2B 3	30, Sup 7 Sup 7, 73	1987 1999	
			Sup 7, 73 Sup 7, 77, 99,		
	<i>ortho</i> -Toluidine	1	100F	2012	
	<i><i>>ortho </i></i> 2.4 Xviiding	2B	123	In prep	
	2,4-Xylidine 4-Chloro- <i>ortho</i> -toluidine	3 2A	16, Sup 7 77, 99	1987 2010	
	2,5-Diaminotoluene	3	16, Sup 7	1987	
	2,5-Xylidine	3	16, Sup 7	1987	

Ü	tts Classified by the IARC Monographs, Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
	5-Chloro- <i>ortho</i> -toluidine	3	77, 99	2010	
	2,4-Diaminotoluene 4-Chloro- <i>ortho</i> -phenylenediamine	2B 2B	16, Sup 7 27, Sup 7	1987 1987	
	2-Amino-4-chlorophenol	2B	123	In prep	
	Styrene-7,8-oxide	2A	Sup 7, 60, 121	In prep	NB: Overall evaluation upgraded to Group 2A with supporting evidence
06.12.9	1,2-Dibromo-3-chloropropane	2B	20, Sup 7, 71	1999	from other relevant data
	2,3-Dibromopropan-1-ol	2B	77	2000	
	1,2,3-Trichloropropane	2A	63	1995	
	1,3-Dichloro-2-propanol	2B	101	2013	
96-24-2	3-Monochloro-1,2-propanediol	2B	101	2013	
96-33-3	Methyl acrylate	2B	39, Sup 7, 71, 122	In prep	
	Ethylenethiourea	3	Sup 7, 79	2001	NB: Overall evaluation downgraded to Group 3 with supporting evidence from other relevant data
	gamma-Butyrolactone	3	11, Sup 7, 71	1999	
	Eugenol <i>ortho</i> -Aminoazotoluene	3 2B	36, Sup 7 8, Sup 7	1987 1987	
	Disulfiram	3	12, Sup 7	1987	
	Furfuryl alcohol	2B	119	2019	
98-01-1	Furfural	3	63	1995	
	Cumene	2B	101	2013	
	a-Methylstyrene	2B	101	2013	
	alpha-Chlorinated toluenes (benzal chloride, benzotrichloride, benzyl chloride) and benzoyl chloride (combined exposures)	2A	29, Sup 7, 71	1999	
	Nitrobenzene	2B	65	1996	
99-08-1 	Nitrotoluenes	3	65	1996	
	5-Nitro- <i>ortho</i> -toluidine 1,2-Diamino-4-nitrobenzene	3	48 16, Sup 7	1990 1987	
	2-Amino-4-nitrophenol	3	10, Sup /	1987	
	5-Nitro- <i>ortho</i> -anisidine	3	27, Sup 7	1987	
99-80-9	<i>N</i> -Methyl- <in< i="">,4-dinitrosoaniline</in<>	3	1, Sup 7	1987	
	$\langle i \rangle N \langle i \rangle$, $\langle i \rangle N \langle i \rangle$ - Dimethyl- $\langle i \rangle p \langle i \rangle$ -toluidine	2B	115	2018	
	4-Chloronitrobenzene	2B	65, 123	In prep	
	<i>>i>para</i> -Nitroanisole 4-Vinylcyclohexene	2B 2B	123 Sup 7, 60	In prep 1994	
	Ethylbenzene	2B	77	2000	
100-42-5		2A	60, 82, 121	In prep	
100-75-4	<i>N</i> -Nitrosopiperidine	2B	17, Sup 7	1987	
101-14-4	4,4'-Methylenebis(2-chloroaniline) (MOCA)	1	Sup 7, 57, 99, 100F	2012	NB: Overall evaluation upgraded to Group 1 based on mechanistic and other relevant data
	Chloropropham	3	12, Sup 7	1987	
	Dinitrosopentamethylenetetramine	3	11, Sup 7	1987	
	Michler's base [4,4 -methylenebis($\le i \ge N < i > , \le i \ge N < i > -dimethyl)$ -benzenamine] 4,4'-Methylenediphenyl diisocyanate	2B 3	27, Sup 7, 99 19, Sup 7, 71	2010 1999	
	4,4'-Methylenedianiline	2B	39, Sup 7, 71	1999	
	4,4'-Diaminodiphenyl ether	2B	29, Sup 7	1987	
	Diglycidyl resorcinol ether	2B	36, Sup 7, 71	1999	
	<i>meta</i> -Cresidine	3	27, Sup 7	1987	
	Triethanolamine Dhanisanharida	3	77	2000	
	Phenicarbazide 2-Ethylhexyl acrylate	3 2B	12, Sup 7 60, 122	1987 In prep	
	Di(2-ethylhexyl) adipate	3	Sup 7, 77	2000	
	Azobenzene	3	8, Sup 7	1987	
	Acetaminophen (see Paracetamol)				
	Paracetamol (Acetaminophen)	3	50, 73	1999	
	<i>>quasion = disconnection =</i>	3	27, Sup 7 29, Sup 7, 71	1987 1999	
	<i>>qi>para</i> -Benzoquinone dioxime <i>N</i> , <i>N</i> -Diethylthiourea	3	29, Sup 7, 71 79	2001	
	Caprolactam	3	39, Sup 7, 71	1999	Moved to Group 3 following 2019 update to the <i>IARC Monographs</i> Preamble
105-74-8	Lauroyl peroxide	3	36, Sup 7, 71	1999	
	<i>para</i> -Dichlorobenzene	2B	Sup 7, 73	1999	
106-47-8	<i>para</i> -Chloroaniline	2B	57	1993	
	<i>para</i> -Phenylenediamine	3	16, Sup 7	1987	
	<i><i>>quinone</i><i-quinone< i=""></i-quinone<></i> 4-Vinylcyclohexene diepoxide	3 2B	15, Sup 7, 71 Sup 7, 60	1999 1994	
	1,2-Epoxybutane	2B 2B	47, 71	1994	NB: Overall evaluation upgraded to Group 2B with supporting evidence from other relevant data
106-89-8	Epichlorohydrin	2A	11, Sup 7, 71	1999	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
		2.	15 5 7 71	1000	NB: Overall evaluation upgraded to Group 2A with supporting evidence
106-93-4	Ethylene dibromide	2A 2B	15, Sup 7, 71	1999	from other relevant data

	ts Classified by the IARC Monographs , Volumes 1–123	C	Volume	V	Additional to C
CAS No.	Agent	Group	Volume Sup 7, 54, 71,	Year	Additional information
106-99-0	1,3-Butadiene	1	97, 100F	2012	
107-02-8	Acrolein	3	63, Sup 7	1995	
107-05-1	Allyl chloride	3	36, Sup 7, 71	1999	
	1,2-Dichloroethane	2B	20, Sup 7, 71	1999	
	Acrylonitrile	2B	71	1999	
107-14-2	Chloroacetonitrile	3	52, 71	1999	
107-30-2	Chloromethyl methyl ether (see Bis(chloromethyl)ether; chloromethyl methyl ether)				
108-05-4	Vinyl acetate	2B	Sup 7, 63	1995	
	Methyl isobutyl ketone	2B	101	2013	
	Succinic anhydride	3	15, Sup 7	1987	
108-45-2	<i>meta</i> -Phenylenediamine	3	16, Sup 7	1987	
108-46-3	Resorcinol	3	15, Sup 7, 71	1999	
108-60-1	Bis(2-chloro-1-methylethyl)ether	3	41, Sup 7, 71	1999	
			-		
	Melamine	2B	Sup 7, 73, 119	2019	
108-88-3		3	47, 71	1999	
108-94-1	Cyclohexanone	3	47, 71 47, 71	1999 1999	
	β-Picoline	3	122	In prep	
	Tetrahydrofuran	2B	119	2019	
110-00-9		2B	63	1995	
	<i>tatan</i> -1,4-Dichlorobutene	3	15, Sup 7, 71	1999	
110-86-1	· · · · · · · · · · · · · · · · · · ·	2B	77, 119	2019	
110-91-8	Morpholine	3	47, 71	1999	
	Diethanolamine	2B	77, 101	2013	
	Bis(2-chloroethyl)ether	3	9, Sup 7, 71	1999	
	2-Butoxyethanol	3	88	2006	
	Azaserine	2B	10, Sup 7	1987	
	Propylene Chlorendic acid	3 2B	Sup 7, 60 48	1994 1990	
115-28-6		3 3	30, Sup 7	1990	
	Tris(2-chloroethyl) phosphate	3	48, 71	1999	
116-06-3		3	53	1991	
110 00 3	Andread	,	55	1//1	
116-14-3	Tetrafluoroethylene	2A	19, Sup 7, 71, 110	2017	NB: Overall evaluation upgraded Group 2A on the basis of sufficie evidence in experimental animals striking and atypical pattern of tu
	Dantron (Chrysazin; 1,8-Dihydroxyanthraquinone)	2B	50	1990	
	Quercetin	3	Sup 7, 73	1999	
	2-Aminoanthraquinone	3	27, Sup 7	1987	
	Bis(2-ethylhexyl) phthalate (see Di(2-ethylhexyl) phthalate) Di(2-ethylhexyl)phthalate	2B	Sup 7, 77, 101	2013	
	Hexachlorobenzene	2B	Sup 7, 77, 101	2001	
	Anthranilic acid	3	16, Sup 7	1987	
	2,4,6-Trinitrotoluene	3	65	1996	
119-34-6	4-Amino-2-nitrophenol	3	16, Sup 7	1987	
119-61-9	Benzophenone	2B	101	2013	
	3,3'-Dimethoxybenzidine (<i>ortho</i> -Dianisidine)	2B	4, Sup 7	1987	
	3,3'-Dimethylbenzidine (<i>ortho</i> -Tolidine)	2B	1, Sup 7	1987	
	Anthracene	3	92, Sup 7	2010	
	Isosafrole	3	10, Sup 7	1987	
120-71-8	<i>para</i> -Cresidine	2B 2B	27, Sup 7	1987 1999	
	2,4-Dinitrotoluene	2B 2B	15, Sup 7, 71 65	1999	
	2-Amino-5-nitrothiazole	3	31, Sup 7	1987	
	<i>N</i> , <i>N</i> , -Dimethylaniline	3	57, Sup 7	1993	
	Malathion	2A	30, Sup 7, 112	2017	
121-88-0	2-Amino-5-nitrophenol	3	57	1993	
	Simazine	3	53, 73	1999	
122-42-9		3	12, Sup 7	1987	
	Phenyl glycidyl ether	2B	47, 71	1999	
	Hydroquinone	3	15, Sup 7, 71	1999	
	Maleic hydrazide	3	4, Sup 7	1987	
	β-Myrcene 1,4-Dioxane	2B 2B	119 11, Sup 7, 71	2019 1999	
	1,4-Dioxane Chlorodibromomethane	3 3	52, 71	1999	
	Methylarsonic acid	2B	100C	2012	
	Monomethylarsonic acid (see Methylarsonic acid)				
125-33-7	Primidone	2B	108	2016	
	Griseofulvin	2B	Sup 7, 79	2001	NB: Overall evaluation upgraded
	Tris(2,3-dibromopropyl) phosphate Nitrogen mustard <i>N</i> -oxide	2A 2B	20, Sup 7, 71 9, Sup 7	1999	Group 2A with supporting evider from other relevant data
	Nitrogen mustard <1>N 1 -oxide Chloroprene	2B 2B	9, Sup / Sup 7, 71	1987	
	Hydroxyurea	3 3	76	2000	
	Tetrachloroethylene (Perchloroethylene)	2A	Sup 7, 63, 106	2014	
	<i>N</i> , <i>N</i> -Dimethylacetamide	2B	123	In prep	
	Sulfafurazole (Sulfisoxazole)	3	24, Sup 7	1987	
128-37-0	Butylated hydroxytoluene (BHT)	3	40, Sup 7	1987	
128-66-5	Vat Yellow 4	3	48	1990	
129-00-0	Pyrene	3	Sup 7, 92	2010	
	2-Methyl-1-nitroanthraquinone (uncertain purity)	2B	27, Sup 7	1987	

CAS No.	tts Classified by the <i>IARC Monographs</i> , Volumes 1–123 Agent	Group	Volume	Year	Additional information
	Blue VRS	3	16, Sup 7	1987	Additional information
	Oxyphenbutazone	3	13, Sup 7	1987	
	1-Hydroxyanthraquinone	2B	82	2002	
	Yellow OB	3	8, Sup 7	1987	
	Sodium <i>ortho</i> -phenylphenate	2B	Sup 7, 73	1999	
	Dibenzothiophene	3	103	2013	
133-06-2		3	30, Sup 7	1987	
	1-Naphthylamine	3	4, Sup 7	1987	
	<i>N</i> -Phenyl-2-naphthylamine	3 2B	16, Sup 7	1987 1987	
	Phenazopyridine hydrochloride 2,4,5-Trimethylaniline	3	24, Sup 7 27, Sup 7	1987	
137-17-7		3	Sup 7, 53	1991	
137-20-6		3	Sup 7, 53	1991	
	Shikimic acid	3	40, Sup 7	1987	
	Cyclamates (sodium cyclamate)	3	Sup 7, 73	1999	
	Nitrilotriacetic acid and its salts	2B	48, 73	1999	NB: Evaluated as a group
139-65-1	4,4'-Thiodianiline	2B	27, Sup 7	1987	
139-94-6	Nithiazide	3	31, Sup 7	1987	
140-11-4	Benzyl acetate	3	40, Sup 7, 71	1999	
140-56-7	<i>para</i> -Dimethylaminoazobenzenediazo sodium sulfonate	3	8, Sup 7	1987	
140-57-8	Aramite®	2B	5, Sup 7	1987	
140-88-5	Ethyl acrylate	2B	39, Sup 7, 71,	In prep	
			122		
141-32-2	<i>n</i> -Butyl acrylate	3	39, Sup 7, 71	1999	
141-37-7	3,4-Epoxy-6-methylcyclohexylmethyl-3,4-epoxy-6-methylcyclo-hexanecarboxylate	3	11, Sup 7, 71	1999	
			_		
	Thiouracil 2,4-Hexadienal	2B 2B	Sup 7, 79 101	2001	
	Z,4-Hexadienal Chlordecone (Kepone)	2B 2B	20, Sup 7	1987	+
	Vinblastine sulfate	3	26, Sup 7	1987	
	Methyl selenac	3	12, Sup 7	1987	
	Sodium diethyldithiocarbamate	3	12, Sup 7	1987	
	8-Hydroxyquinoline	3	13, Sup 7	1987	
148-82-3	Melphalan	1	9, Sup 7, 100A	2012	
149-29-1	Patulin	3	40, Sup 7	1987	
149-30-4	2-Mercaptobenzothiazole	2A	115	2018	
150-13-0	<i>para</i> -Aminobenzoic acid	3	16, Sup 7	1987	
150-68-5	Monuron	3	Sup 7, 53	1991	
150-69-6	Dulcin	3	12, Sup 7	1987	
	Aziridine	2B	9, Sup 7, 71	1999	NB: Overall evaluation upgraded Group 2B with supporting eviden from other relevant data
	Bischloroethyl nitrosourea (BCNU)	2A	26, Sup 7	1987	
	<i>para</i> -Nitrosodiphenylamine	3	27, Sup 7	1987	
	Phenelzine sulfate	3	24, Sup 7	1987	
	Dibenzo[<i>a</i> , <i>i<i>)i</i>)]pyrene Dibenzo[<i>a</i>,<i>h</i>) [pyrene</i>	2B 2B	92	2010	
	Coronene	3 3	Sup 7, 92 32, Sup 7, 92	2010 1987	
	Benzo[<i>ghi</i>] perylene	3	92, Sup 7, 92	2010	
	Anthanthrene	3	92, Sup 7	2010	
	Dibenzo[<i>>a</i> , <i>l</i>) pyrene	2A	Sup 7, 92	2010	NB: Overall evaluation upgraded Group 2A with supporting evider
102 47 2	Dihampa (sish sish satura) harantan haran	2	Sum 7 02	2010	from other relevant data
	Dibenzo[<i>h</i> , <i>rst</i>] pentaphene	3	Sup 7, 92 92	2010	
	Dibenzo[<i>e</i> , <i>l</i>)]pyrene Dibenzo[<i>e</i> , <i>e</i>) [pyrene	3	92 Sup 7, 92	2010	+
	Dibenzo[<1>a 1 , <1>e 1 Jpyrene	3	92, Sup 7	2010	
	Naphtho[2,3- <i>e</i>]pyrene	3	92, Sup / 92	2010	
	Indeno[1,2,3- <i>-e</i> -jpyrene	2B	Sup 7, 92	2010	
	7 <i>H</i> -Dibenzo[< <i>i</i> > <i>c</i> <i i>, carbazole	2B	32, Sup 7, 103	2013	
-7.57.2			, -wp /, 103	2012	NB: Overall evaluation upgraded
	Benzo[<i>c</i>]phenanthrene	2B	92, Sup 7	2010	Group 2B with supporting evider from other relevant data
	Benzo[<i>pg</i>) Jchrysene Perylene	3	92 Sup 7, 92	2010 2010	NB: Overall evaluation upgraded
	Benz[<i>j</i>]aceanthrylene	2B	92	2010	Group 2B with supporting mecha and other relevant data
	11 <i>H</i> -Benz[<i>bc</i>]aceanthrylene	3	92	2010	
	4H-Cyclopenta[<i>def</i>]chrysene	3	92	2010	
	Benzo[<i>ghi</i>]fluoranthene	3	92, Sup 7	2010	
	Naphtho[2,1- <i>a</i>]fluoranthene	3	92	2010	
	Benzo[<i>a</i>]fluoranthene	3	92, Sup 7	2010	
	Benzo[<i>c</i>) fluorene Benzo[<i>j</i>) fluoranthene	3 2B	92, Sup 7 92	2010	
	Benzo[<i>j</i>]fluoranthene Benzo[<i>b</i>]fluoranthene	2B 2B	92	2010	
	Benzo[<1>b 1]fluoranthene Fluoranthene	2B 3			
	Fluoranthene Benzo[$\leq i \geq k < i > $]fluoranthene	2B	Sup 7, 92 92	2010	
	13H-Dibenzo[<i>>a</i> , <i>>g</i>]fluorene	2B 3	92	2010	+
	Benz[<i>/i> aceanthrylene</i>	3	92	2010	
213-46-7		3	92	2010	+
	Benzo[<i>b</i> chrysene	3	92	2010	
	Dibenz[<i>a</i> , <i>c</i> anthracene	3	Sup 7, 92	2010	
	Triphenylene	3	Sup 7, 92	2010	
21/-39-4					

Agent	s Classified by the IARC Monographs, Volumes 1–123				
		6	37.1	37	A 11'0' 1' 6' 0'
CAS No.	Agent Dibenz[<i>a</i> , <i>j</i>]anthracene	Group 3	Volume Sup 7, 92	Year 2010	Additional information
224-41-91	Ordenz[\langle \mu \langle \tau	3	Sup 7, 92	2010	NB: Overall evaluation upgraded to
224-42-0 I	Dibenz[<i>a</i> , <i>j</i>]acridine	2A	32, Sup 7, 103	2013	Group 2A with supporting evidence
					from other relevant data
224 52 2 5	N. 1. S. 10 . S. 1. 10 . 1. 11	an	102	2012	NB: Overall evaluation upgraded t
224-53-3 1	Dibenz[$\langle i \rangle c \langle i \rangle$, $\langle i \rangle h \langle i \rangle$] acridine	2B	103	2013	Group 2B with supporting evidence from other relevant data
225-11-6 H	Benz[<i>a</i>]acridine	3	32, Sup 7, 103	2013	nom other relevant data
	Benz[<i>c</i>) acridine	3	32, Sup 7, 103	2013	
	$Dibenz[\le i \ge a , < i > h] acridine$	2B	32, Sup 7, 103	2013	
	Benzo[<i>a</i>]fluorene	3	92, Sup 7	2010	
	Benzo[<i>b</i>]naphtho[2,1-d]thiophene Benzo[<i>b</i>]fluorene	3	103 92, Sup 7	2013	
	Dibenzo- <i>para</i> -dioxin	3	92, Sup / 69	1997	
	Benzofuran	2B	63	1995	
	Methyl parathion	3	30, Sup 7	1987	
209 91 7 N	Methoxsalen (8-methoxypsoralen) plus ultraviolet A radiation	1	24, Sup 7,	2012	
270-01-71	victionsalen (8-methoxypsoraten) plus utitaviolet A fadiation	1	100A	2012	
299-75-2	Freosulfan	1	26, Sup 7, 100A	2012	
			4, Sup 7, 71,		
302-01-2 H	Hydrazine	2A	4, Sup 7, 71,	2018	
302-17-0	Chloral hydrate	2A	63, 84, 106	2014	
	Lasiocarpine	2B	10, Sup 7	1987	
	Ochratoxin A	2B	Sup 7, 56	1993	
305-03-3	Chlorambucil	1	26, Sup 7,	2012	
		1	100A	2012	
309-00-2 A	Aldrin (see Dieldrin, and aldrin metabolized to dieldrin)				ND: Overell avaluation on 1 1
313-67-7	Aristolochic acid	1	82, 100A	2012	NB: Overall evaluation upgraded Group 1 based on mechanistic and
515-01=1 F	Indicated with	1	52, 150A	2012	relevant data
313-67-7 A	Aristolochic acid, plants containing	1	82, 100A	2012	
314-13-6 H		3	8, Sup 7	1987	
315-18-4 2		3	12, Sup 7	1987	
315-22-0 N	Monocrotaline	2B	10, Sup 7	1987	
320-67-2 A	Aracitidina	2A	50	1990	NB: Overall evaluation upgraded Group 2A with supporting evidence
320-67-2 F	Azacitidine	2A	30	1990	from other relevant data
331-39-5	Caffeic acid	2B	56	1993	from other relevant data
					NB: Overall evaluation upgraded
333-41-5 I	Diazinon	2A	112	2017	Group 2A based on mechanistic
					evidence
	Diazomethane Diazomethane	3 2B	7, Sup 7 110	1987	
333-07-1 F	Perfluorooctanoic acid (PFOA)	ZB	110	2017	NB: Overall evaluation upgraded
366-70-1 F	Procarbazine hydrochloride	2A	26, Sup 7	1987	Group 2A with supporting eviden
			, _F /		from other relevant data
	Гriamterene	2B	108	2016	
	Ethylene sulfide	3	11, Sup 7	1987	
439-14-5 I	Diazepam	3	Sup 7, 66	1996	
442 48 1 N	Metronidazole	2B	13, Sup 7	1987	
443-46-1	vietronidazoie	2B	15, Sup /	1967	
		_	26, Sup 7,		
446-86-6	Azathioprine	1	100A	2012	
480-54-6 F		3	10, Sup 7	1987	
480-81-9	Seneciphylline	3	10, Sup 7	1987	
494 30 0	Mathavruacouslan	2.4	40 5 7	1007	NB: Overall evaluation upgraded
484-20-8 5	5-Methoxypsoralen	2A	40, Sup 7	1987	Group 2A with supporting eviden from other relevant data
492-17-1	2,4'-Diphenyldiamine	3	16, Sup 7	1987	Sin Galer relevant data
			1, Sup 7, 99,		
492-80-8 A	Auramine	2B	100F	2012	
493-52-7 N	Methyl red	3	8, Sup 7	1987	
494-03-1	Chlornaphazine	1	4, Sup 7, 100A	2012	
	$\langle i \rangle N \langle i \rangle$, $\langle i \rangle N \langle i \rangle$ -Bis(2-chloroethyl)-2-naphthylamine (see Chlornaphazine)				
	Acridine orange	3	16, Sup 7	1987	
501-30-4 F		3	79	2001	
	Mustard gas (see Sulfur mustard)				
505-60-2	Sulfur mustard	1	9, Sup 7, 100F	2012	
	Fetranitromethane Chlorobenzilate	2B 3	65 30, Sup 7	1996 1987	
	-Chloro-2-methylpropene	2B	30, Sup 7	1987	
513-37-1 1		3	40, Sup 7	1995	
	Kaempferol	3	31, Sup 7	1987	
	CI Acid Orange 20	3	8, Sup 7	1987	
523-44-4	Orange I (see CI Acid Orange 20)				
	Angelicin plus ultraviolet A radiation	3	40, Sup 7	1987	
531-76-0 N		2B	9, Sup 7	1987	
531-82-8	<i>N</i> -[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide	2B 3	7, Sup 7 8, Sup 7	1987 1987	
532-82-1					

	nts Classified by the IARC Monographs , Volumes 1–123	<u> </u>	V-l	¥7	Adjusting to the
CAS No.	Agent	Group	Volume	Year	Additional information NB: Overall evaluation upgraded
	8 1,2-Dimethylhydrazine	2A	4, Sup 7, 71	1999	Group 2A with supporting evidence from other relevant data
	1 <i>meta</i> -Dichlorobenzene	3	73	1999	
	3 Isobutyl nitrite	2B	122	In prep	
	6 1,3-Dichloropropene (technical-grade)	2B	41, Sup 7, 71	1999	
	9 Malonaldehyde	3	36, Sup 7, 71	1999	
42-88-1 107-30-2		1	4, Sup 7, 100F	2012	
	2 Trichloroacetonitrile	3	52, 71	1999	
	1 Tris(1-aziridinyl)phosphine oxide	3		1999	
	6 Mannomustine dihydrochloride	3	9, Sup 7	1987	
	0 1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone	2B	9, Sup 7	1987	
	5 Glycidol	2B 2A	7, Sup 7	2000	NB: Overall evaluation upgraded Group 2A with supporting eviden
5(2.10.1	7 D1i	2	79	2001	from other relevant data
	7 Doxylamine succinate	3		2001 1987	
	7 Semicarbazide hydrochloride 3 3-Chloro-2-methylpropene, technical grade	2B	12, Sup 7 63, 115	2018	
	9 CI Basic Red 9	2B	57, 99	2010	
	5 2-Nitronaphthalene	3 3	46	1989	
	1 Methylazoxymethanol acetate	2B	10, Sup 7	1989	
392-02-	i Methylazoxymethanol acetate	ZD	10, Sup /	1987	VD (1) 0 11 1 1
593-60-	2 Vinyl bromide	2A	39, Sup 7, 71, 97	2008	NB: (1) Overall evaluation upgrad Group 2A based on mechanistic a other relevant data; (2) For practical purposes, vinyl bromide should be considered to similarly to the human carcinoger chloride
593-70-	4 Chlorofluoromethane	3	41, Sup 7, 71	1999	
	0 Methyl carbamate	3	12, Sup 7	1987	
	1 Sulfasalazine	2B	108	2016	
602-60-	8 9-Nitroanthracene	3	33, Sup 7	1987	
602-87-	9 5-Nitroacenaphthene	2B	16, Sup 7	1987	
604-75-	1 Oxazepam	2B	Sup 7, 66	1996	
606-20-2	2 2,6-Dinitrotoluene	2B	65	1996	
607-57-	8 2-Nitrofluorene	2B	46, 105	2014	
609-20-	1 2,6-Dichloro- <i>para</i> -phenylenediamine	3	39, Sup 7	1987	
611-06-2	3 2,4-Dichloro-1-nitrobenzene	2B	123	In prep	
613-35-	4 < i > N < /i > , < i > N < /i >' - Diacetylbenzidine	2B	16, Sup 7	1987	
615-05-	4 2,4-Diaminoanisole	2B	Sup 7, 79	2001	
615-28-	1 <i>ortho</i> -Phenylenediamine dihydrochloride	2B	123	In prep	
615-53-2	2 < i > N < /i > -Methyl < i > N < /i > -nitrosourethane	2B	4, Sup 7	1987	
	9 3,5-Dinitrotoluene	3	65	1996	
621-64-	7 < i > N < /i > -Nitrosodi < i > n < /i > -propylamine	2B	17, Sup 7	1987	
627-12-	3 <i>n</i> -Propyl carbamate	3	12, Sup 7	1987	
630-20-	6 1,1,1,2-Tetrachloroethane	2B	41, Sup 7, 71,	2014	
			106		
631-64-	1 Dibromoacetic acid	2B	101	2013	
632-99-	5 Magenta	2B	Sup 7, 57, 99,	2012	
			100F		
	0 Clofibrate	3	Sup 7, 66	1996	
	5 Dihydroaceanthrylene	3	92	2010	
680-31-	9 Hexamethylphosphoramide	2B	15, Sup 7, 71	1999	
684-93-	5 < i > N < /i > -Methyl - < i > N < /i > -nitrosourea	2A	17, Sup 7	1987	NB: Overall evaluation upgraded Group 2A with supporting evider from other relevant data
	1 2-Methylimidazole	2B	101	2013	
	5 2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	2B	7, Sup 7	1987	
723-46-6	6 Sulfamethoxazole	3	Sup 7, 79	2001	
	9 <i>N</i> -Ethyl- <i>N</i> -nitrosourea 4 Glycidaldehyde	2A 2B	17, Sup 7	1987 1999	NB: Overall evaluation upgraded Group 2A with supporting evider from other relevant data
	1 2-Nitropyrene	3	11, Sup 7, 71 46	1999	
	4 Dihydroxymethylfuratrizine (see also Panfuran S)	3	24, Sup 7	1987	
	4 Panfuran S (containing dihydroxymethylfuratrizine)	2B	24, Sup 7	1987	
	8 Aziridyl benzoquinone	3	9, Sup 7	1987	
	4 Nitrovin	3	31, Sup 7	1987	
	4 Trichlormethine (Trimustine hydrochloride)	2B	Sup 7, 50	1990	
	6 4-Methylimidazole	2B	101	2013	
	2 Dimethoxane	3	15, Sup 7	1987	
	9 1-Methylphenanthrene	3	Sup 7, 92	2010	
	0 4,4'-Methylene bis(2-methylaniline)	2B	4, Sup 7	1987	
	9 Sudan I	3	8, Sup 7	1987	
	4 Temazepam	3	66	1996	
	9 Dimethyl hydrogen phosphite	3	48, 71	1999	
	7 3-Nitrofluoranthene	3	33, Sup 7	1987	
	3 Amaranth	3	8, Sup 7	1987	
	3 $< i>N < /i> - Nitrosodi < i>n < /i> - butylamine$	2B	17, Sup 7	1987	
	2 < i > N < /i > -Nitrosopyrrolidine	2B	17, Sup 7	1987	
	8 Rhodamine 6G	3	17, Sup 7	1987	
			1432-12447 /		i .
989-38-					
989-38-1 1071-83-	Gilyphosate 2 2-(1-Aziridinyl)ethanol	2A 3	112 9, Sup 7	2017 1987	

A	of Charles I had by the IABC Management Values 1 122				
ū	nts Classified by the IARC Monographs, Volumes 1–123				
CAS No.	Agent	Group	Volume 4, Sup 7, 71,	Year	Additional information NB: Overall evaluation upgraded to
	1,3-Propane sultone	2A	110	2017	Group 2A with supporting evidence from other relevant data
	Dithranol	3	13; Sup 7	1987	
	Decabromodiphenyl oxide	3	48, 71	1999	
	Gallium arsenide (see Arsenic and inorganic arsenic compounds) Ferric oxide	2	86, 100C	2012 1987	
	Antimony trioxide	3 2B	1, Sup 7	1987	
	Vanadium pentoxide	2B 2B	86	2006	
	Haematite	3	1, Sup 7	1987	
1318-02-1	Zeelites other than enjoyite (elimentialite, mbillimite mendanite, non-filmaya Israerese	3	68	1997	
1330-20-7		3	47, 71	1999	VID. VI. 1. 1
1332-21-4 77536-67-5* 12172-73-5 77536-66-4* 12001-29-5 12001-28-4 77536-68-6*	Asbestos (all forms, including actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite)	1	14, Sup 7, 100C	2012	NB: Mineral substances (e g tale or vermiculite) that contain asbestos should also be regarded as carcinogenic to humans br/> *The presence of an asterisk indicates that the registration is for a substance which CAS does not treat in its regular CA index
1313-27-5	Molybdenum trioxide	2B	118	2018 online	
	Carbon black	2B	Sup 7, 65, 93	2010	
	Polychlorinated biphenyls	1	18, Sup 7, 107	2016	
	Iron sorbitol-citric acid complex	3	2, Sup 7	1987	
	Antimony trisulfide	3	47	1989	
1401-55-4	Tannic acid and tannins	3	10, Sup 7	1987	
	Aflatoxins (B1, B2, G1, G2, M1)	1	Sup 7, 56, 82, 100F	2012	
	1,2:3,4-Diepoxybutane (see <i>Monographs</i> on 1,3-Butadiene)		11, Sup 7	1987	
	Trifluralin	3	53	1991	
	1,2-Diethylhydrazine	2B	4, Sup 7, 71	1999	
	Methyl <i>dert</i> -butyl ether	3	73	1999 1999	
	Bisphenol A diglycidyl ether (Araldite) 4-Hydroxyazobenzene	3	47, 71 8, Sup 7	1999	
	Benzyl violet 4B	2B	16, Sup 7	1987	
	6-Methylchrysene	3	Sup 7, 92	2010	
	3-Methylfluoranthene	3	Sup 7, 92	2010	
	2,3,7,8-Tetrachlorodibenzo- <i>para</i> -dioxin	1	Sup 7, 69, 100F	2012	
	Nitrofen (technical-grade) Chlorothalonil	2B	30, Sup 7	1987	
		2B	Sup 7, 73	1999	NB: Overall evaluation downgraded to
1912-24-9	Atrazine Pieloram	3	53, 73	1999	Group 3 with supporting evidence from other relevant data
	CI Orange G	3	8, Sup 7	1987	
1936-15-8	Orange G (see CI Orange G)				
1937-37-7	CI Direct Black 38 (see Benzidine, dyes metabolized to)				
	Triethylene glycol diglycidyl ether	3	11, Sup 7, 71	1999	
	Vincristine sulfate	3	26, Sup 7	1987	
	Fluometuron	3	30, Sup 7	1987	
	Bis(1-aziridinyl)morpholinophosphine sulfide	3	9, Sup 7	1987	
	1,5-Naphthalenediamine	3	27, Sup 7	1987	
2303-16-4	Senkirkine	3	30, Sup 7 31, Sup 7	1987 1987	
	Fast Green FCF	3	16, Sup 7	1987	
2385-85-5		2B	20, Sup 7	1987	
	Bis(2,3-epoxycyclopentyl)ether	3	47, 71	1999	
2425-06-1	Captafol	2A	53	1991	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
	CI Pigment Red 3	3	57	1993	
	CI Direct Blue 15	2B	57	1993	
	11-Aminoundecanoic acid	3 2D	39, Sup 7	1987	
	Disperse Blue 1 CI Direct Blue 6 (see Benzidine, dyes metabolized to)	2B	48	1990	
	Oil Orange SS	2B	8, Sup 7	1987	
	Agaritine	3	31, Sup 7	1987	
	Sunset Yellow FCF	3	8, Sup 7	1987	
2783-94-0	HC Blue No 1	2B	57	1993	
2784-94-3	les variables	3	48	1990	
2784-94-3 2832-40-8	Disperse Yellow 3		36, Sup 7, 71	1999	
2784-94-3 2832-40-8 2835-39-4	Allyl isovalerate	3			
2784-94-3 2832-40-8 2835-39-4 2871-01-4	Allyl isovalerate HC Red No 3	3	57	1993	
2784-94-3 2832-40-8 2835-39-4 2871-01-4 2955-38-6	Allyl isovalerate HC Red No 3 Prazepam	3	57 66	1996	
2784-94-3 2832-40-8 2835-39-4 2871-01-4 2955-38-6 2973-10-6	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate	3 3 2B	57 66 54, 71	1996 1999	
2784-94-3 2832-40-8 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-6	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone	3 3 2B 3 2B	57 66 54, 71 52, 71 11, Sup 7, 71	1996 1999 1999 1999	
2784-94-3 2832-40-8 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-0 3068-88-6 3118-97-6	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone	3 3 2B 3	57 66 54, 71 52, 71	1996 1999 1999	
2784-94-3 2832-40-6 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-C 3068-88-6 3118-97-6 3173-72-6	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone Sudan II	3 2B 3 2B 3	57 66 54, 71 52, 71 11, Sup 7, 71 8, Sup 7	1996 1999 1999 1999 1987	
2784-94-3 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-6 3173-72-6 3252-43-5 3296-90-6	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone Sudan II 1,5-Naphthalene diisocyanate Dibromoacetonitrile 2,2-Bis(bromomethyl)propane-1,3-diol	3 3 2B 3 2B 3 3 2B 2B 2B	57 66 54, 71 52, 71 11, Sup 7, 71 8, Sup 7 19, Sup 7, 71 52, 71, 101 77	1996 1999 1999 1999 1987 1999 2013 2000	
2784-94-3 2832-40-8 2871-01-4 2955-38-6 2973-10-6 3018-12-6 3173-72-6 3173-72-6 3252-43-5 3296-90-6 3351-28-8	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone Sudan II 1,5-Naphthalene diisocyanate Dibromoacetonitrile 2,2-Bis(bromomethyl)propane-1,3-diol	3 3 2B 3 2B 3 2B 2B 2B 2B 3	57 66 54, 71 52, 71 11, Sup 7, 71 8, Sup 7 19, Sup 7, 71 52, 71, 101 77 Sup 7, 92	1996 1999 1999 1999 1987 1999 2013 2000 2010	
2784-94-3 2832-40-8 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-6 3173-72-6 3173-72-6 3252-43-5 3296-90-6 3351-28-8 3351-30-2	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone Sudan II 1,5-Naphthalene diisocyanate Dibromoacetonitrile 2,2-Bis(bromomethyl)propane-1,3-diol 1-Methylchrysene	3 3 2B 3 2B 3 3 2B 2B 2B 3 3	57 66 54, 71 52, 71 11, Sup 7, 71 8, Sup 7 19, Sup 7, 71 52, 71, 101 77 Sup 7, 92 Sup 7, 92	1996 1999 1999 1999 1987 1999 2013 2000 2010	
2784-94-3 2832-40-6 2835-39-4 2871-01-4 2955-38-6 2973-10-6 3018-12-C 3068-88-6 3118-97-6 3173-72-6 3252-43-5 3296-90-6 3351-28-8 3351-30-2 3351-31-3	Allyl isovalerate HC Red No 3 Prazepam Diisopropyl sulfate Dichloroacetonitrile beta-Butyrolactone Sudan II 1,5-Naphthalene diisocyanate Dibromoacetonitrile 2,2-Bis(bromomethyl)propane-1,3-diol	3 3 2B 3 2B 3 2B 2B 2B 2B 3	57 66 54, 71 52, 71 11, Sup 7, 71 8, Sup 7 19, Sup 7, 71 52, 71, 101 77 Sup 7, 92	1996 1999 1999 1999 1987 1999 2013 2000 2010	

Agen	ts Classified by the IARC Monographs , Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
	Ponceau 3R	2B	8, Sup 7	1987	
	Carmoisine	3	8, Sup 7	1987	
	2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	2B	7, Sup 7	1987	
	AF-2 [2-(2-Furyl)-3-(5-nitro-2-furyl)acrylamide]	2B	31, Sup 7	1987 2010	
	5-Methylchrysene Ponceau MX	2B 2B	Sup 7, 92 8, Sup 7	1987	
3771-19-5		2B	24, Sup 7	1987	
	Isophosphamide	3	24, Sup 7	1987	
3795-88-8	5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)-amino]-2-oxazolidinone	2B	7, Sup 7	1987	
3844-45-9	Brilliant Blue FCF, disodium salt	3	16, Sup 7	1987	
	4,5',8-Trimethylpsoralen	3	40, Sup 7	1987	
	4,5'-Dimethylangelicin plus ultraviolet A radiation	3	Sup 7	1987	
4170-30-3	Crotonaldehyde	3	63	1995	
4342-03-4	Dacarbazine	2B	26, Sup 7	1987	
4548-53-2	Ponceau SX	3	8, Sup 7	1987	
4549-40-0	<i>N</i> -Nitrosomethylvinylamine	2B	17, Sup 7	1987	
	5-Aminoacenaphthene	3	16, Sup 7	1987	
	Guinea Green B	3	16, Sup 7	1987	
	4-Chloro- <i>meta</i> -phenylenediamine	3	27, Sup 7	1987	
	Light Green SF	3	16, Sup 7	1987	
	D & C Red No 9	3	Sup 7, 57	1993	
	1,4-Diamino-2-nitrobenzene	3	Sup 7, 57	1993	
	Dibenzo[<i>a</i> , <i>e</i>]fluoranthene	3	Sup 7, 92	2010	
	Glycidyl oleate	3	11, Sup 7	1987	
5456-28-0	Ethyl selenac	3	12, Sup 7	1987	NTD 0 11 1 1
5522-43-0	1-Nitropyrene	2A	Sup 7, 46, 105	2014	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
5589-96-8	Bromochloroacetic acid	2B	101	2013	nom other relevant data
5989-27-5	< <i>i>d</i> <i i>-Limonene	3	56, 73	1999	NB: Overall evaluation downgrade Group 3 with supporting evidence
6164 00 2	Chlordimeform	3	30, Sup 7	1987	other relevant data
	Citrus Red No 2	2B	8, Sup 7	1987	
	Sudan Red 7B	3	8, Sup 7	1987	
	CI Acid Orange 3	3	57	1993	
	Sudan Brown RR	3	8, Sup 7	1987	
	CI Acid Red 114	2B	57	1993	
6870-67-3		3	10, Sup 7	1987	
	5,6-Cyclopenteno-1,2-benzanthracene	3	92	2010	
	Methylene blue	3	108	2016	
7439-92-1		2B	23, Sup 7	1987	
7439-97-6	Mercury and inorganic mercury compounds	3	58	1993	
7440-02-0	Nickel, metallic and alloys	2B	Sup 7, 49	1990	
7440-07-5	Plutonium	1	78, 100D	2012	
7440-29-1	Thorium-232 and its decay products	1	78, 100D	2012	
7440-38-2	Arsenic and inorganic arsenic compounds	1	23, Sup 7, 100C	2012	
	Beryllium and beryllium compounds	1	Sup 7, 58, 100C	2012	
	Cadmium and cadmium compounds	1	58, 100C	2012 1990	
	Chromium, metallic Cobalt and cobalt compounds	3 2B	Sup 7, 49 52	1990	NB: Evaluated as a group
	Cobalt and cobalt compounds Cobalt metal without tungsten carbide	2B	86	2006	NB. Evaluated as a group
440-48-4 		ZD		2000	
12070-12-1	Cobalt metal with tungsten carbide	2A	86	2006	
	Sulfur dioxide	3	54	1992	
	Glycidyl stearate	3	11, Sup 7	1992	
	Zalcitabine	2B	76	2000	
	6-Nitrochrysene	2A	Sup 7, 46, 105	2014	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
7519-36-0	<i>N</i> -Nitrosoproline	3	17, Sup 7	1987	
	Dichloroacetylene	3	39, Sup 7, 71	1999	
7631-86-9	Silica, amorphous	3	Sup 7, 68	1997	
7647-01-0	Hydrochloric acid	3	54	1992	
	Strong-inorganic-acid mists containing sulfuric acid (see Acid mists)				
	Hydrogen peroxide	3	36, Sup 7, 71	1999	
	Potassium bromate	2B	Sup 7, 73	1999	
	Sodium chlorite	3	52	1991	
	Selenium and selenium compounds	3	9, Sup 7	1987	
	Toxaphene (Polychlorinated camphenes)	2B	Sup 7, 79	2001	
	Terpene polychlorinates (Strobane®)	3	5, Sup 7	1987	
8001-58-9		2A	Sup 7, 92 45	2010	
8002-05-9	Crude oil Coal tars (see Coal-tar distillation)	3	45 35, Sup 7	1989 1987	
	Coal tars (see Coal-tar distillation) Coal-tar distillation	1	92, 100F	2012	
	Acriflavinium chloride	3	92, 100F 13, Sup 7	1987	
	Saccharated iron oxide	3	2, Sup 7	1987	
	Bitumens, extracts of steam-refined and air-refined; steam-refined, cracking-residue and	ر			
8052-42-4	air-refined bitumens (see Bitumens, occupational exposures)		35, Sup 7	1987	
052-42-4 <hr/>	Bitumens, occupational exposure to straight-run bitumens and their emissions during		1		
	road paving	2B	103	2013	
	Carrageenan, native	3	31, Sup 7	1987	
	Kava extract	2B	108	2016	
	Polytetrafluoroethylene	3	19, Sup 7	1987	

Ager	nts Classified by the IARC Monographs , Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
	Polyvinyl chloride	3	19, Sup 7	1987	Additional information
	Polyethylene	3	19, Sup 7	1987	
	Polyvinyl alcohol	3	19, Sup 7	1987	
	Polyacrylic acid	3	19, Sup 7	1987	
	Polypropylene	3	19, Sup 7	1987	
	Polyvinyl acetate Vinyl chloride-vinyl acetate copolymers	3	19, Sup 7 19, Sup 7	1987 1987	
	Polyvinyl pyrrolidone	3	19, Sup 7	1987	
	Polystyrene	3	19, Sup 7	1987	
	Styrene-acrylonitrile copolymers	3	19, Sup 7	1987	
	Styrene-butadiene copolymers	3	19, Sup 7	1987	
	Iron-dextrin complex	3	2, Sup 7	1987	
	Iron-dextran complex	2B	2, Sup 7	1987	
	Polyurethane foams Polychloroprene	3	19, Sup 7	1987 1987	
	Vinylidene chloride-vinyl chloride copolymers	3	19, Sup 7 19, Sup 7	1987	
	Polymethyl methacrylate	3	19, Sup 7	1987	
	Polymethylene polyphenyl isocyanate	3	19, Sup 7	1987	
	Cobalt sulfate and other soluble cobalt(II) salts	2B	86	2006	
	Iodine-131 (see Radioiodines)				
	Radon-222 and its decay products	1	43, 78, 100D	2012	
	Sterigmatocystin	2B	10, Sup 7	1987	
	Parasorbic acid	3	10, Sup 7	1987	
	Strontium-90 (see Fission products)	3	15 5 7	1007	
10380-28-6	Copper 8-hydroxyquinoline	3	15, Sup 7	1987	NB: There is also conclusive evidence
10540-29-1	Tamoxifen	1	66, 100A	2012	that tamoxifen reduces the risk of contralateral breast cancer in breast cancer patients
10595-95-6	<i>N</i> -Nitrosomethylethylamine	2B	17, Sup 7	1987	1
	Chloramine	3	84	2004	
11056-06-7	Bleomycins	2B	26, Sup 7	1987	NB: Overall evaluation upgraded to Group 2B with supporting evidence from other relevant data
12001-79-5	Vitamin K substances	3	76	2000	
12070-12-1 					
7440-48-4					
12122-67-7		3	12, Sup 7	1987	
	Attapulgite (see Palygorskite)	an.	60	1007	
	Palygorskite (Attapulgite) (long fibres, > 5 micrometres) Palygorskite (Attapulgite)(short fibres, < 5 micrometres)	2B 3	68 68	1997 1997	+
	Aurothioglucose	3	13, Sup 7	1987	
12427-38-2		3	12, Sup 7	1987	
12663-46-6	Cyclochlorotine	3	10, Sup 7	1987	
13010-47-4	1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	2A	26, Sup 7	1987	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
13045-94-8	Medphalan	3	9, Sup 7	1987	
	Radium-224 and its decay products	1	78, 100D	2012	
13256-22-9	<i>N</i> -Nitrososarcosine	2B	17, Sup 7	1987	
	Rifampicin	3	24, Sup 7	1987	
	Titanium dioxide	2B	47, 93	2010	
13483-18-6 13909-09-6	1,2-Bis(chloromethoxy)ethane 1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea (Methyl-CCNU) (see Semustine)	3	15; Sup 7, 71	1999	
13909-09-6	Semustine [1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea, Methyl-CCNU]	1	Sup 7, 100A	2012	
13982-63-3	Radium-226 and its decay products	1	78, 100D	2012	
	Wollastonite	3	Sup 7, 68	1997	
					NB: Overall evaluation upgraded to
14047-09-7	3,3',4,4'-Tetrachloroazobenzene	2A	117	2019	Group 2A
14484-64-1		3	12, Sup 7	1987	
	Phosphorus-32, as phosphate	1	78, 100D	2012	
	Tale containing asbestiform fibres (see Asbestos) Tale not containing asbestes or asbestiform fibres	3	42, Sup 7	1987	
	Talc not containing asbestos or asbestiform fibres Talc-based body powder (perineal use of)	2B	42, Sup 7, 93 93	2010 2010	+
			Sup 7, 68,		
14808-60-7	Silica dust, crystalline, in the form of quartz or cristobalite	1	100C	2012	
14000-00-7		+	10, Sup 7		
14901-08-7	Cycasin	2B	10, Sup /	1987	
14901-08-7 15086-94-9	Eosin	3	15, Sup 7	1987	
14901-08-7 15086-94-9 15262-20-1	Eosin Radium-228 and its decay products	3	15, Sup 7 78, 100D	1987 2012	
14901-08-7 15086-94-9 15262-20-1 15501-74-3	Eosin Radium-228 and its decay products Sepiolite	3 1 3	15, Sup 7 78, 100D Sup 7, 68	1987 2012 1997	
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3	Eosin Radium-228 and its decay products Sepiolite Isatidine	3 1 3 3	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7	1987 2012 1997 1987	
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade	3 1 3	15, Sup 7 78, 100D Sup 7, 68	1987 2012 1997	NB: Overall evaluation upgraded to Group 2A with supporting evidence
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3 15625-89-5	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade Cisplatin	3 1 3 3 2B 2A	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7 122 26, Sup 7	1987 2012 1997 1987 In prep	
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3 15625-89-5 15663-27-1	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade Cisplatin 2,2',5,5'-Tetrachlorobenzidine	3 1 3 3 2B 2A	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7 122 26, Sup 7	1987 2012 1997 1987 In prep 1987	Group 2A with supporting evidence
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3 15625-89-5 15663-27-1 15721-02-5 16065-83-1	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade Cisplatin 2,2',5,5'-Tetrachlorobenzidine Chromium (III) compounds	3 1 3 3 2B 2A	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7 122 26, Sup 7	1987 2012 1997 1987 In prep	Group 2A with supporting evidence
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3 15625-89-5 15663-27-1 15721-02-5 16065-83-1 16071-86-6	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade Cisplatin 2,2',5,5'-Tetrachlorobenzidine	3 1 3 3 2B 2A	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7 122 26, Sup 7	1987 2012 1997 1987 In prep 1987	Group 2A with supporting evidence from other relevant data NB: Overall evaluation upgraded to Group 1 based on mechanistic and othe
14901-08-7 15086-94-9 15262-20-1 15501-74-3 15503-86-3 15625-89-5 15663-27-1 15721-02-5 16065-83-1 16071-86-6 16543-55-8 64091-91-4	Eosin Radium-228 and its decay products Sepiolite Isatidine Trimethylolpropane triacrylate, technical grade Cisplatin 2,2',5,5'-Tetrachlorobenzidine Chromium (III) compounds CI Direct Brown 95 (see Benzidine, dyes metabolized to) <i>N</i> '-Nitrosonomicotine (NNN) and 4-(<i>N</i> '-Nitrosomethylamino)-1-(3-	3 1 3 3 2B 2A 3 3	15, Sup 7 78, 100D Sup 7, 68 10, Sup 7 122 26, Sup 7 27, Sup 7 49 Sup 7, 89,	1987 2012 1997 1987 In prep 1987 1987	Group 2A with supporting evidence from other relevant data NB: Overall evaluation upgraded to

	ts Classified by the IARC Monographs, Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information NB: Overall evaluation upgraded to
17117-34-9	3-Nitrobenzanthrone	2B	105	2014	Group 2B with supporting evidence from other relevant data
18540-29-9	Chromium (VI) compounds	1	Sup 7, 49, 100C	2012	
	Streptozotocin	2B	17, Sup 7	1987	
	3-Carbethoxypsoralen 7-Nitrobenz[<i>a</i>]anthracene	3	40, Sup 7 46	1987 1989	
	3-Nitroperylene	3	46	1989	
20830-75-5		2B	108	2016	
	Daunomycin Ethyl tellurac	2B	10, Sup 7	1987 1987	
	Etnyl tellurac T ₂ -Trichothecene	3	12, Sup 7 31, Sup 7	1987	
21884-44-6	-	3	10, Sup 7	1987	
	Tetrachlorvinphos	2B	30, Sup 7, 112	2017	
22349-59-3	1,4-Dimethylphenanthrene	3	Sup 7, 92	2010	NID: Overall evaluation unameded to
22398-80-7	Indium phosphide	2A	86	2006	NB: Overall evaluation upgraded to Group 2A
22506-53-2	3,9-Dinitrofluoranthene	2B	46, 65, 105	2014	and the second s
22571-95-5		3	31, Sup 7	1987	
	Oestradiol mustard 4,4'-Dimethylangelicin plus ultraviolet A radiation	3	9, Sup 7	1987 1987	
22975-76-4	4,4 -Dimethylangenem plus ultraviolet A radiation	3	Sup 7	1987	NB: Overall evaluation upgraded to
23214-92-8	Adriamycin	2A	10, Sup 7	1987	Group 2A with supporting evidence from other relevant data
23246-96-0		2B	10, Sup 7, 82	2002	
23255-93-8 23537-16-8	Hycanthone mesylate Rusulosin	3	13, Sup 7 40, Sup 7	1987 1987	
	Potassium bis(2-hydroxyethyl)dithiocarbamate	3	12, Sup 7	1987	
24560-98-3	<i>ci>cis</i> -9,10-Epoxystearic acid	3	11, Sup 7, 71	1999	
	<i>para</i> -Aramid fibrils	3	68	1997	
	Vinyl toluene Butylated hydroxyanisole (BHA)	3 2B	60 40, Sup 7	1994 1987	
25038-54-4		3	19, Sup 7	1987	
	Acepyrene (3,4-dihydrocyclopenta[<i>d</i>) pyrene)	3	92	2010	
25812-30-0		3	66	1996	
	<i>trans</i> -2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole	2B	7, Sup 7	1987	
	A-alpha-C (2-Amino-9 <i>H</i> -pyrido[2,3- <i>b</i>]indole)	2B	40, Sup 7	1987	
26308-28-1		3	66	1996	
	Toluene diisocyanates Hydroxysenkirkine	2B 3	39, Sup 7, 71 10, Sup 7	1999 1987	
	Cyclopenta[<i>cd</i>) pyrene	2A	Sup 7, 92	2010	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
28434-86-8	3,3'-Dichloro-4,4'-diaminodiphenyl ether	2B	16, Sup 7	1987	
	Prednimustine	3	50	1990	
29767-20-2	<i>N</i> -Nitrosofolic acid Teniposide	2A	17, Sup 7	1987 2000	NB: Overall evaluation upgraded to Group 2A with supporting evidence
				1001	from other relevant data
29975-16-4	Estazolam <i>N</i> -Nitrosohydroxyproline	3	66 17, Sup 7	1996 1987	
	Zidovudine (AZT)	2B	76	2000	
33229-34-4	HC Blue No 2	3	57	1993	
33419-42-0	Etoposide	1	76, 100A	2012	NB: Overall evaluation upgraded to Group 1 based on mechanistic and other relevant data
33419-42-0 15663-27-1 11056-06-7	Etoposide in combination with cisplatin and bleomycin	1	76, 100A	2012	
33543-31-6	2-Methylfluoranthene	3	Sup 7, 92	2010	
	Pentosan polysulfate sodium	2B	108	2016	
	<i>N</i> '-Nitrosoanabasine (NAB) 1.2.3-Tris(chloromethoxy)propane	3	37, Sup 7, 89 15, Sup 7, 71	2007 1999	
	Doxefazepam	3	66	1999	
42397-64-8	1,6-Dinitropyrene	2B	46, 105	2014	
	1,8-Dinitropyrene	2B	Sup 7, 46, 105	2014	
50926-11-9 51264-14-3	Indium tin oxide Amsacrine	2B 2B	118 76	2018 online 2000	
51481-61-9	Cimetidine	3	50	1990	
51630-58-1		3	53	1991	
52645-53-1 52918-63-5	Permethrin Deltamethrin	3	53 53	1991 1991	
	Carrageenan, degraded (Poligeenan)	2B	31, Sup 7	1991	
53973-98-1	Poligeenan (see Carrageenan, degraded) Chlorozotocin	2A	50	1990	NB: Overall evaluation upgraded to Group 2A with supporting evidence
					from other relevant data
	<i>N</i> Nitrosoguvacine	3	Sup 7, 85	2004	
	<i>N</i> -Nitrosoguvacoline 1,4-Bis(chloromethoxymethyl)benzene	3	Sup 7, 85 15; Sup 7, 71	2004 1999	
	1- <i>tert</i> -Butoxypropan-2-ol	2B	88, 119	2019	
57018-52-7					

Agen	nts Classified by the IARC Monographs, Volumes 1–123				
		C	V-l	V	A 3 3'4'1 ' f4'
CAS No.	Agent	Group	Volume	Year	Additional information See Polychlorinated biphenyls, dioxin-
	3,4,5,3',4'-Pentachlorobiphenyl (PCB-126)	1	100F	2012	like, with a TEF according to WHO
	4-Nitropyrene	2B	46, 105	2014	
59277-89-3	Aciclovir	3	76	2000	NB: Overall evaluation upgraded to
59536-65-1	Polybrominated biphenyls	2A	41, Sup 7, 107	2016	Group 2A with supporting evidence from other relevant data, namely mechanistic similarity with polychlorinated biphenyls classified in Group 1
	HC Yellow No 4	3	57	1993	
59865-13-3 79217-60-0	Ciclosporin (see Cyclosporine)				
59865-13-3 79217-60-0	Cyclosporine	1	50, 100A	2012	
	Petasitenine	3	31, Sup 7	1987	
	3-(<i>N</i> -Nitrosomethylamino)propionitrile	2B	Sup 7, 85	2004	
62450-06-0	Trp-P-1 (3-Amino-1,4-dimethyl-5 <i>H</i> -pyrido[4,3- <i>b</i> -]indole)	2B	31, Sup 7	1987	
	Trp-P-2 (3-Amino-1-methyl-5 <i>H</i> -pyrido[4,3- <i>b</i> -]indole)	2B	31, Sup 7	1987	
63041-90-7	6-Nitrobenzo[<i>a</i>]pyrene	3	Sup 7, 46	1989	
64436-13-1	Arsenobetaine and other organic arsenic compounds that are not metabolized in humans	3	100C	2012	
64742-93-4	Bitumens, occupational exposure to oxidized bitumens and their emissions during roofing	2A	103	2013	
65271-80-9	Mitoxantrone	2B	76	2000	
	Coal-tar pitch	1	35, Sup 7,	2012	
66733-21-9		1	100F 42, Sup 7,	2012	
			100C		
	Glu-P-2 (2-Aminodipyrido[1,2- <i>a</i> > :3',2'- <i>d</i>]imidazole)	2B	40, Sup 7	1987	
	Glu-P-1 (2-Amino-6-methyldipyrido[1,2- <i\(\frac{1}{2}\)< i=""> Made alaba G (2 Amino 2 methyl 0 \(\frac{1}{2}\) H (2 methyl 0 \(\frac{1}{2}\) H (3 methyl 0 \(\frac{1}{2}\)</i\(\frac{1}{2}\)<>	2B	40, Sup 7	1987	
68006-83-7	MeA-alpha-C (2-Amino-3-methyl-9 <i>H</i> -pyrido[2,3- <i>b</i>]indole)	2B	40, Sup 7	1987	
68308-34-9	Shale oils	1	35, Sup 7, 100F	2012	
68603-42-9	Coconut oil diethanolamine condensate	2B	101	2013	
	Didanosine	3	76	2000	
71267-22-6	<i>N</i> '-Nitrosoanatabine (NAT)	3	37, Sup 7, 89	2007	
	5-Methylangelicin plus ultraviolet A radiation	3	Sup 7	1987	
	1,3-Dinitropyrene	2B	46, 105	2014	
76180-96-6	IQ (2-Amino-3-methylimidazo[4,5- <i-f< i="">]quinoline)</i-f<>	2A	Sup 7, 56	1993	NB: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data
	MeIQ (2-Amino-3,4-dimethylimidazo[4,5- <ii>//i>]quinoline)</ii>	2B	Sup 7, 56	1993	
	3-Chloro-4-(dichloromethyl)-5-hydroxy-26 <i>H</i>)-furanone	2B	84	2004	
	MeIQx (2-Amino-3,8-dimethylimidazo[4,5- <i-f< i="">/i>]quinoxaline)</i-f<>	2B	Sup 7, 56	1993	
	Droloxifene	3	66	1996	
	Bromochloroacetonitrile 3-(<i>N</i> -Nitrosomethylamino)propionaldehyde	3	52, 71 Sup 7, 85	1999 2004	
	Pyrido[3,4- <i>z-/i>]psoralen</i>	3	40, Sup 7	1987	
	7-Methylpyrido[3,4- <i×< i="">]psoralen</i×<>	3	40, Sup 7	1987	
	Ptaquiloside	3	40, Sup 7	1987	
	Toremifene	3	66	1996	
90045-36-6	<i>Ginkgo biloba</i> extract	2B	108	2016	
	4,4',6-Trimethylangelicin plus ultraviolet A radiation	3	Sup 7	1987	
	<i>N</i> -Methylolacrylamide	3	60	1994	
924-42-5					
	Microcystin-LR	2B	94	2010	
	PhIP (2-Amino-1-methyl-6-phenylimidazo[4,5- <i3b< i="">) pyridine)</i3b<>	2B	56 46, 65, 105	1993 2014	
111025-46-8	3,7-Dinitrofluoranthene Pioglitazone	2B 2A	46, 65, 105 108	2014	
	Naphtho[1,2- <i>b</i>]fluoranthene	2A 3	92	2010	
	Fumonisin B _₁	2B	82	2002	
116355-83-0	<i>Fusarium moniliforme</i> , toxins derived from (fumonisin B	2B	56	1993	
118399-22-7	7	3	94	2010	
	Rosiglitazone	3	108	2016	
	Carbon nanotubes, multiwalled MWCNT-7	2B	111	2017	
	Carbon nanotubes, multiwalled, other than MWCNT-7	3	111	2017	
	Carbon nanotubes, single-walled	3	111	2017	
308068-56-6	MWCNT-7)				
308068-56-6	Multiwalled carbon nanotubes other than MWCNT-7 (see Carbon nanotubes, multiwalled, other than MWCNT-7)				
308068-56-6	Single-walled carbon nanotubes (see Carbon nanotubes, single-walled)				
308076-74-6	Silicon carbide, fibrous	2B	111	2017	
409-21-2	Silicon carbide whiskers	2A	111	2017	
	Acheson process, occupational exposure associated with	1	111	2017	
	Acid mists, strong inorganic	1	54, 100F	2012	
	Acrylic fibres	3	19, Sup 7	1987	
	Acrylonitrile-butadiene-styrene copolymers	3	19, Sup 7	1987 2012	
	Alcoholic beverages <i>>Aloe vera</i> , whole leaf extract	1 2B	44, 96, 100E 108	2012	
	Alpha particles (see Radionuclides)	213	100	2010	
			34, Sup 7, 92,	2012	
	Aluminium production	1	100F	2012	

CAS No.					
01-01-11	Agent	Group	Volume	Year	Additional information
	Anaesthetics, volatile	3	11, Sup 7	1987	
	Androgenic (anabolic) steroids	2A	Sup 7	1987	
	Areca nut Art glass, glass containers and pressed ware (manufacture of)	1 2A	85, 100E 58	2012 1993	
	Art glass, glass containers and pressed ware (manufacture of)		Sup 7, 99,		
	Auramine production	1	100F	2012	
	Benzidine, dyes metabolized to	1	99, 100F	2012	NB: Overall evaluation upgraded t Group 1 based on mechanistic and
	Beta particles (see Radionuclides)				relevant data
	Betel quid with tobacco	1	Sup 7, 85, 100E	2012	
	Betel quid without tobacco	1	Sup 7, 85, 100E	2012	
	Biomass fuel (primarily wood), indoor emissions from household combustion of	2A	95 54	2010 1992	
	Bisulfites Bitumens, occupational exposure to hard bitumens and their emissions during mastic	3 2B	103	2013	
	asphalt work	2B 2B	103	2013	
	BK polyomavirus (BKV) Boot and shoe manufacture and repair (see Leather dust, Benzene)	2B		1987	
	Bracken fern	2B	25, Sup 7 40, Sup 7	1987	
	Calcium carbide production	3	92	2010	
	Carbon electrode manufacture	2A	92	2010	
	Carpentry and joinery	2B	25, Sup 7	1987	
	Ceramic implants	3	74	1999	
	Chimney sweeping (see Soot)		92	2010	
	Chlorinated drinking-water	3	52	1991	
	Chlorinated paraffins of average carbon chain length C12 and average degree of	2B	48	1990	
	chlorination approximately 60%	∠B	70	1990	
	Chlorophenols (see Polychlorophenols) Chlorophenoxy herbicides	2B	41, Sup 7	1987	
	chlorophenoxy heroicides <i>Cloorchis sinensis</i> (infection with)	1 1	61, 100B	2012	
	Coal dust	3	68	1997	
			Sup 7, 92,		
	Coal gasification	1	100F	2012	
	Coal, indoor emissions from household combustion of	1	95, 100E	2012	NB: There is "evidence suggesting
	Coffee, drinking	3	51, 116	2018 online	drinking for cancers of the pancrea liver, female breast, uterine endometrium, and prostate Invers associations with coffee drinking I been observed with cancers of the and uterine endometrium
	Coke production	1	Sup 7, 92, 100F	2012	
	Continuous glass filament (see Glass filament) Dental materials	2	74	1999	
	Diesel engine exhaust (see Engine exhaust, diesel)	3	/4	1999	
	Diesel fuel, marine	2B	45	1989	NB: Overall evaluation upgraded Group 2B with supporting evidence
	Diesel fuels, distillate (light)	3	45	1989	from other relevant data
	Dry cleaning (occupational exposures in)	2B	63	1995	
	Dyes metabolized to benzidine (see Benzidine, dyes metabolized to)				
	Electric fields, extremely low-frequency	3	80	2002	
	Electric fields, static	3	80	2002	
	Engine exhaust, diesel Engine exhaust, gasoline	1 2B	46, 105 46, 105	2014 2014	
	Epstein-Barr virus	2B	70, 100B	2014	
	Estrogen therapy, postmenopausal	1	70, 100B 72, 100A	2012	
	Estrogen-progestogen menopausal therapy (combined)	1	72, 91, 100A	2012	
	Estrogen-progestogen oral contraceptives (combined)	1	72, 91, 100A	2012	NB: There is also convincing evid in humans that these agents confer protective effect against cancer in endometrium and ovary
	Firefighter (occupational exposure as a)	2B	98	2010	,
	Fission products, including strontium-90	1	100D	2012	
-	Flat-glass and specialty glass (manufacture of)	3	58	1993	
	Fluorescent lighting	3	55	1992	
	Fluoro-edenite fibrous amphibole	1	111	2017	
	Foreign bodies (see Ceramic implants, Dental materials, Implanted foreign bodies, Metallic implants, Organic polymeric materials, Orthopaedic implants, Polymeric implants, Silicone breast implants)				
	Frying, emissions from high-temperature	2A	95	2010	
	Fuel oils, distillate (light)	3	45	1989	
	Fuel oils, residual (heavy)	2B	45	1989	
	Furniture and cabinet making (see Wood dust)		25, Sup 7	1987	
	<i>Fusarium graminearum</i> , <i>F. culmorum</i> , and <i>F. crookwellense</i> , toxins derived from (zearalenone, deoxynivalenol, nivalenol, and fusarenone X)	3	Sup 7, 56	1993	
	sis Francisco de caracterista de la constanta della constanta de la constanta de la constanta de la constanta	3	56	1993	
	<i>Fusarium sporotrichioides</i> , toxins derived from (T-2 toxin) Gamma-Radiation (see Y- and Gamma-Radiation)				
	rusarium spororicnioiaes (!>rusarium spororicnioiaes Gamma-Radiation (see X- and Gamma-Radiation)				NB: Overall evaluation upgraded

	ents Classified by the IARC Monographs , Volumes 1-123				
CAS No.	Agent Gasoline engine exhaust (see Engine exhaust, gasoline)	Group	Volume	Year	Additional information
	Glass filament, continuous	3	43, 81	2002	
	Goldenseal root powder	2B	108	2016	
	Haematite mining (underground)	1	1, Sup 7, 100D	2012	
	Hair colouring products (personal use of)	3	57, 99	2010	
	Hairdresser or barber (occupational exposure as a)	2A	57, 99	2010	
	<i>Helicobacter pylori</i> (infection with)	1	61, 100B	2012	
	Hepatitis B virus (chronic infection with)	1	59, 100B	2012	
	Hepatitis C virus (chronic infection with) Hepatitis D virus	3	59, 100B 59	2012 1994	
	Hexachlorocyclohexanes	2B	20, Sup 7	1994	
	High-temperature frying (see Frying)		, <u>-</u>		
	Household combustion of biomass fuel (see Biomass fuel, indoor emissions from				
	household combustion of)				
	Household combustion of coal (see Coal, indoor emissions from household combustion)				
	Human herpesvirus type 4 (see Epstein-Barr virus)				
	Human herpesvirus type 8 (see Kaposi sarcoma herpesvirus)				
	Human immunodeficiency virus type 1 (infection with)	1	67, 100B	2012	
	Human immunodeficiency virus type 2 (infection with)	2B	67	1996	
	Human papillomavirus genus beta (except types 5 and 8) and genus gamma Human papillomavirus type 68	3 2A	90, 100B 100B	2012 2012	
	riuman papinomavitus type oo	ZA	100B	2012	NB: The HPV types that have been
	Human papillomavirus types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59	1	64, 90, 100B	2012	classified as carcinogenic to humar differ by an order of magnitude in a for cervical cancer
	Human papillomavirus types 26, 53, 66, 67, 70, 73, 82	2B	100B	2012	
					NB: Classified by phylogenetic ana
	Human papillomavirus types 30, 34, 69, 85, 97	2B	100B	2012	to the HPV genus alpha types class in Group 1
	Human papillomavirus types 5 and 8 (in patients with epidermodysplasia verruciformis)	2B	100B	2012	in Group 1
	Human papillomavirus types 6 and 11	3	90, 100B 67, 100B	2012 2012	
	Human T-cell lymphotropic virus type I Human T-cell lymphotropic virus type II	3	67, 100B	1996	
	Hypochlorite salts	3	52	1991	
	Implanted foreign bodies of metallic chromium or titanium and of cobalt-based,	3	74	1999	
	chromium-based, and titanium-based alloys, stainless steel and depleted uranium	3	/4	1999	
	Implanted foreign bodies of metallic cobalt, metallic nickel and an alloy powder	2B	74	1999	
	containing 66-67% nickel, 13-16% chromium, and 7% iron Insulation glass wool	3	43, 81	2002	
	Involuntary smoking (see Tobacco smoke, second-hand)		15, 61	2002	
	Ionizing radiation (all types)	1	100D	2012	
	Iron and steel founding (occupational exposure during)	1	34, Sup 7,	2012	
	Isopropyl alcohol manufacture using strong acids	1	100F Sup 7, 100F	2012	
	Isopropyl oils	3	15, Sup 7, 71	1999	
	JC polyomavirus (JCV)	2B	104	2014	
	Jet fuel	3	45	1989	
	Kaposi sarcoma herpesvirus	1	70, 100B	2012	
	Lead compounds, inorganic	2A	Sup 7, 87	2006	NB: Organic lead compounds are metabolized at least in part, to ioni
	Lead compounds, organic	3	23, Sup 7, 87	2006	both in humans and animals. To the extent that ionic lead, generated frouganic lead, is present in the body will be expected to exert the toxici associated with inorganic lead
	Leather dust	1	100C	2012	
		3	25, Sup 7 25, Sup 7	1987	
	Leather goods manufacture	2		1987	
	Leather tanning and processing	3		1987	
	ě	3 3	25, Sup 7 82	1987 2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>)	3	25, Sup 7 82 Sup 7, 57, 99,	2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production	3 3 1	25, Sup 7 82 Sup 7, 57, 99, 100F	2002 2012	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency	3 3 1 2B	25, Sup 7 82 Sup 7, 57, 99, 100F 80	2002 2012 2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static	3 3 1 2B 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80	2002 2012 2002 2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency	3 3 1 2B	25, Sup 7 82 Sup 7, 57, 99, 100F 80	2002 2012 2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i>) in holoendemic areas) Mate, not very hot (drinking)	3 3 1 2B 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80	2002 2012 2002 2002	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i-rubia i="" tinctorum<="">) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i-plasmodium falciparum<="" i="">) in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages)</i-plasmodium></i-rubia>	3 3 1 2B 3 2A 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116	2002 2012 2002 2002 2014 2018 online	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV)	3 3 1 2B 3 2A 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116	2002 2012 2002 2002 2014 2018 online 2014	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites	3 3 1 2B 3 2A 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54	2002 2012 2002 2002 2014 2018 online 2014 1992	
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV)	3 3 1 2B 3 2A 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116	2002 2012 2002 2002 2014 2018 online 2014	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films	3 3 1 2B 3 2A 3 2A 3 2B	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74	2002 2012 2002 2002 2014 2018 online 2014 1992 1999	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i-rubia i="" tinctorum<="">) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i-plasmodium falciparum<="" i="">) in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films Methylmercury compounds</i-plasmodium></i-rubia>	3 3 1 2B 3 2A 3 2A 3 2B 2B	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74 58 94 33, Sup 7	2002 2012 2002 2002 2014 2018 online 2014 1992 1999 1993	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<\i-\textit{Pubia tinctorum}) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <\i-\textit{Plasmodium falciparum}) in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films Methylmercury compounds <\i-\textit{Microcystis} /i> extracts Mineral oils, highly-refined	3 3 1 2B 3 2A 3 2A 3 2B 2B 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74 58 94 33, Sup 7 33, Sup 7	2002 2012 2002 2002 2014 2018 online 2014 1992 1999 1993 2010	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, not (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films Methylmercury compounds <i>Microcystis</i> extracts Mineral oils, highly-refined Mineral oils, untreated or mildly treated	3 3 1 2B 3 2A 3 2A 3 2B 2B 3 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74 58 94 33, Sup 7 33, Sup 7, 100F	2002 2012 2002 2002 2014 2018 online 2014 1992 1999 1993 2010 1987 2012	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<\i>Rubia tinctorum) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, hot (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films Methylmercury compounds <i>Methylmercury compounds <i i="" microcystis<=""> extracts Mineral oils, highly-refined Mineral oils, untreated or mildly treated Modacrylic fibres</i></i>	3 3 1 2B 3 2A 3 2A 3 2B 2B 3 3 1	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74 58 94 33, Sup 7 33, Sup 7 100F 19, Sup 7	2002 2012 2002 2014 2018 online 2014 1992 1999 1993 2010 1987 2012	NB: Evaluated as a group
	Leather tanning and processing Lumber and sawmill industries (including logging) Madder root (<i>Rubia tinctorum</i>) Magenta production Magnetic fields, extremely low-frequency Magnetic fields, static Malaria (caused by infection with <i>Plasmodium falciparum</i> in holoendemic areas) Mate, not very hot (drinking) Mate, not (see Very hot beverages) Merkel cell polyomavirus (MCV) Metabisulfites Metallic implants prepared as thin smooth films Methylmercury compounds <i>Microcystis</i> extracts Mineral oils, highly-refined Mineral oils, untreated or mildly treated	3 3 1 2B 3 2A 3 2A 3 2B 2B 3 3	25, Sup 7 82 Sup 7, 57, 99, 100F 80 80 104 51, 116 104 54 74 58 94 33, Sup 7 33, Sup 7, 100F	2002 2012 2002 2002 2014 2018 online 2014 1992 1999 1993 2010 1987 2012	NB: Evaluated as a group NB: Overall evaluation upgraded t

	ents Classified by the IARC Monographs , Volumes 1–123				
CAS No.	Agent	Group	Volume	Year	Additional information
	Nickel compounds	1	Sup 7, 49, 100C	2012	
	Nickel refining (see Nickel compounds)		11	1976	
	Nitrate or nitrite (ingested) under conditions that result in endogenous nitrosation	2A	94	2010	
	Non-arsenical insecticides (occupational exposures in spraying and application of)	2A	53	1991	
	Oestrogen (see Estrogen)				
	<i>Opisthorchis felineus</i> (infection with)	3	61	1994	
	<i><i>>Opisthorchis viverrini</i> (infection with) Oral contraceptives, combined estrogen-progestogen (see Estrogen-progestogen oral</i>	1	61, 100B	2012	
	contraceptives)				
	Organic polymeric materials	3	74	1999	
	Orthopaedic implants of complex composition and cardiac pacemakers	3	74	1999	
	Outdoor air pollution	1	109	2016	
	Outdoor air pollution, particulate matter in	1	109 47	2016	
	Paint manufacture (occupational exposure in) Painter (occupational exposure as a)	3	47, 98, 100F	1989 2012	
	Particulate matter in outdoor air pollution (see Outdoor air pollution, particulate matter in)	1	17, 50, 1001	2012	
	Paving and roofing with coal-tar pitch (see Coal-tar pitch)		35, Sup 7, 92, 100F	2010	
	Petroleum refining (occupational exposures in)	2A	45	1989	
	Petroleum solvents Phenacetin, analogoic mixtures containing	3	47 Sup 7 100A	1989 2012	
	Phenacetin, analgesic mixtures containing Pickled vegetables (traditional Asian)	2B	Sup 7, 100A 56	1993	+
		213	50	1//3	NB: Overall evaluation upgraded to
	Polychlorinated biphenyls, dioxin-like, with a Toxicity Equivalency Factor (TEF) according to WHO (PCBs 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, 189)	1	107	2016	Group 1 with strong supporting evidence from other relevant data
	Polychlorinated dibenzofurans (see 2,3,4,7,8-Pentachlorodibenzofuran)	3	69	1997	
	Polychlorinated dibenzo- <i>para</i> -dioxins (other than 2,3,7,8-tetrachlorodibenzo-	3	69	1997	
	<i>para</i> -dioxin) Polychlorophenols and their sodium salts (mixed exposures) (see Pentachlorophenol; 2,4,6-Trichlorophenol)	2B	53, 71	1999	
	Polymeric implant prepared as thin smooth films (with the exception of poly-glycolic acid)	2B	74	1999	
	Printing inks	3	65	1996	
	Printing processes (occupational exposures in)	2B	65	1996	
	Processed meat (consumption of)	1	114	2018	
	Proflavine salts	3	24, Sup 7	1987	
	Progestins	2B	Sup 7	1987	
	Progestogen-only contraceptives	2B	72	1999	
	Pulp and paper manufacture	3	25, Sup 7	1987	
	Radiofrequency electromagnetic fields	2B	102	2013	
	Radioiodines, including iodine-131	1	78, 100D	2012	
	Radionuclides, alpha-particle-emitting, internally deposited	1	78, 100D	2012	NB: Specific radionuclides for whi there is sufficient evidence in huma are also listed individually as Grou agents
	Radionuclides, beta-particle-emitting, internally deposited	1	78, 100D	2012	NB: Specific radionuclides for whithere is sufficient evidence in huma are also listed individually as Group agents
	Red meat (consumption of)	2A	114	2018	
	Refractory ceramic fibres	2B	43, 81	2002	
	Rock (stone) wool	3	43, 81 28, Sup 7,	2002	
	Rubber manufacturing industry	1	28, Sup 7, 100F	2012	
	Salted fish, Chinese-style	1	56, 100E	2012	
	<i>Schistosoma haematobium</i> (infection with)	1	61, 100B	2012	
	<i>Schistosoma japonicum</i> (infection with)	2B	61	1994	
	<i>Schistosoma mansoni</i> (infection with)	3	61	1994	
	Shiftwork that involves circadian disruption	2A	98	2010	
	Silicone breast implants	3	74 43, 81	1999 2002	+
	Slag wool Solar radiation	1	43, 81 55, 100D	2002	-
	NAME OF THE PROPERTY OF THE PR	1	23, 1001	2012	
	Soot (as found in occupational exposure of chimney sweeps)	1	35, Sup 7, 92, 100F	2012	
			81	2002	
	Consist assess of the constant Endows 14751 1 C1			7007	
	Special-purpose fibres such as E-glass and '475' glass fibres Sulfites	2B			
	Sulfites	2B 3	54	1992	
	Sulfites Sunlamps and sunbeds (see Ultraviolet-emitting tanning devices) Surgical implants (see Ceramic implants, Dental materials, Implanted foreign bodies,				
	Sulfites Sunlamps and sunbeds (see Ultraviolet-emitting tanning devices)				

118# evidence for ocular melanoma in welders; #Volume 118 concluded that ultraviolet emissions from welding are carcinogenic to humans (Group 1). There is sufficient eviden	CAS No.	Agent	Group	Volume	Year	Additional information
Tobacco smoke, second-hand Tobacco smoking Tobacco, smokeless Tobacco, smokeless Toxins derived from certain <i>Fusarium</i> Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) Ultraviolet-emitting tanning devices Ultraviolet-emitting tanning devices Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes Wood dust Wood smoke (see Biomass fuel, indoor emissions from household combustion) 1 83, 100E 2012 Sup 7, 89, 100E 2012 2012 2018 online *Volume 100D concluded that there issufficether is sufficient evidence for ocular melanoma in welders; evidence for ocular melan		Tetrakis(hydroxymethyl)phosphonium salts	3	48, 71	1999	
Tobacco, smokeless Tobacco, smokeless Tobacco, smokeless Toxins derived from certain <i>Fusarium</i> Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) Ultraviolet-emitting tanning devices Ultraviolet-emitting tanning devices Ultraviolet-emitting tanning devices Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes Wood dust Wood smoke (see Biomass fuel, indoor emissions from household combustion) 1 83, 100E Sup 7, 89, 100E 10D*, 2012 1 55, 100D*, 118# *Volume 100D concluded that there issuffice evidence for ocular melanoma in welders; #Volume 118 concluded that ultraviolet emissions from welding are carcinogenic to humans (Group 1). There is sufficient evidence in humans for the carcinogenicity of ultraviolet emissions from welding) *Uncertain the properties of the		Textile manufacturing industry (work in)	2B	48	1990	
Tobacco, smokeless Toxins derived from certain <i>Fusarium </i> Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) Ultraviolet-emitting tanning devices Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes Wood dust Wood smoke (see Biomass fuel, indoor emissions from household combustion) I Sup 7, 89, 100E 2012 *Volume 100D concluded that there issufficient evidence for ocular melanoma in welders; #Volume 118 concluded that ultraviole emissions from welding are carcinogenic to humans (Group 1). There is sufficient eviden in humans for the carcinogenicity of ultraviole emissions from welding) *Ultraviolet-emitting tanning devices 1 100D 2012 *Unit to the first of the carcinogenicity of ultraviole emissions from welding) *Unit to the first of the carcinogenic to humans (Group 1). There is sufficient evidence in humans for the carcinogenicity of ultraviole emissions from welding) *Ultraviolet-emitting tanning devices 1 100D 2012 *Unit to the first of		Tobacco smoke, second-hand	1	83, 100E	2012	
Toxins derived from certain <i>Fusarium</i> Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) Ultraviolet-emitting tanning devices Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes Wood smoke (see Biomass fuel, indoor emissions from household combustion) 1		Tobacco smoking	1	83, 100E	2012	
Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) 1 55, 100D*, 118# 2018 online *Volume 100D concluded that there issufficient evidence for ocular melanoma in welders; #Volume I18 concluded that ultraviolet emissions from welding are carcinogenic to humans (Group 1). There is sufficient eviden in humans for the carcinogenicity of ultraviolem in humans for the carcinogenic to the carcinogenic to humans for the carcinogenic to		Tobacco, smokeless	1		2012	
Ultraviolet-emitting tanning devices Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes Welding fumes Wood dust Wood smoke (see Biomass fuel, indoor emissions from household combustion)		Toxins derived from certain <i>Fusarium</i> species (see <i>Fusarium</i>)				
Urethane (see Ethyl carbamate) Very hot beverages at above 65 °C (drinking) Welding fumes 1 49, 118 2018 online Wood dust 1 62, 100C 2012 Wood smoke (see Biomass fuel, indoor emissions from household combustion)		Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC)	1		2018 online	#Volume 118 concluded that ultraviolet emissions from welding are carcinogenic to humans (Group 1). There is sufficient evidence in humans for the carcinogenicity of ultraviole
Very hot beverages at above 65 °C (drinking) 2A 116 2018 online Welding fumes 1 49, 118 2018 online Wood dust 1 62, 100C 2012 Wood smoke (see Biomass fuel, indoor emissions from household combustion) 0 2012		Ultraviolet-emitting tanning devices	1	100D	2012	
Welding fumes 1 49, 118 2018 online Wood dust 1 62, 100C 2012 Wood smoke (see Biomass fuel, indoor emissions from household combustion)		Urethane (see Ethyl carbamate)				
Wood dust 1 62, 100C 2012 Wood smoke (see Biomass fuel, indoor emissions from household combustion)		Very hot beverages at above 65 °C (drinking)	2A	116	2018 online	
Wood smoke (see Biomass fuel, indoor emissions from household combustion)		Welding fumes	1	49, 118	2018 online	
		Wood dust	1	62, 100C	2012	
X- and Gamma-Radiation 1 75, 100D 2012		Wood smoke (see Biomass fuel, indoor emissions from household combustion)				
		X- and Gamma-Radiation	1	75, 100D	2012	
		Last update, 25 March 2019				